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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/789,258	02/26/2004	Jaime Bayan	NSC1P295/P05886	9477
22434	7590	11/29/2005	EXAMINER	
BEYER WEAVER & THOMAS LLP			DOAN, THERESA T	
P.O. BOX 70250			ART UNIT	
OAKLAND, CA 94612-0250			PAPER NUMBER	
			2814	

DATE MAILED: 11/29/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

AK

<b>Office Action Summary</b>	Application No.	Applicant(s)	
	10/789,258	BAYAN ET AL.	
	Examiner	Art Unit	
	Theresa T. Doan	2814	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 03 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 17 October 2005.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) 14 and 15 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-13 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 February 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)             | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. _____  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                                    |

## DETAILED ACTION

### *Election/Restrictions*

1. Applicant's election with traverse of claims 1-13 in the reply filed on 10/17/05 is acknowledged. The traversal is on the ground(s) that "Applicant hereby elects, with traverse". This is not found persuasive because Applicant did not distinctly and specifically point out the supposed errors in the restriction requirement.

The requirement is still deemed proper and is therefore made FINAL.

### *Claim Rejections - 35 USC § 102*

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1-13 are rejected under 35 U.S.C. 102(e) as being anticipated by Hasebe et al. (U.S. Pat. 6,713,849).

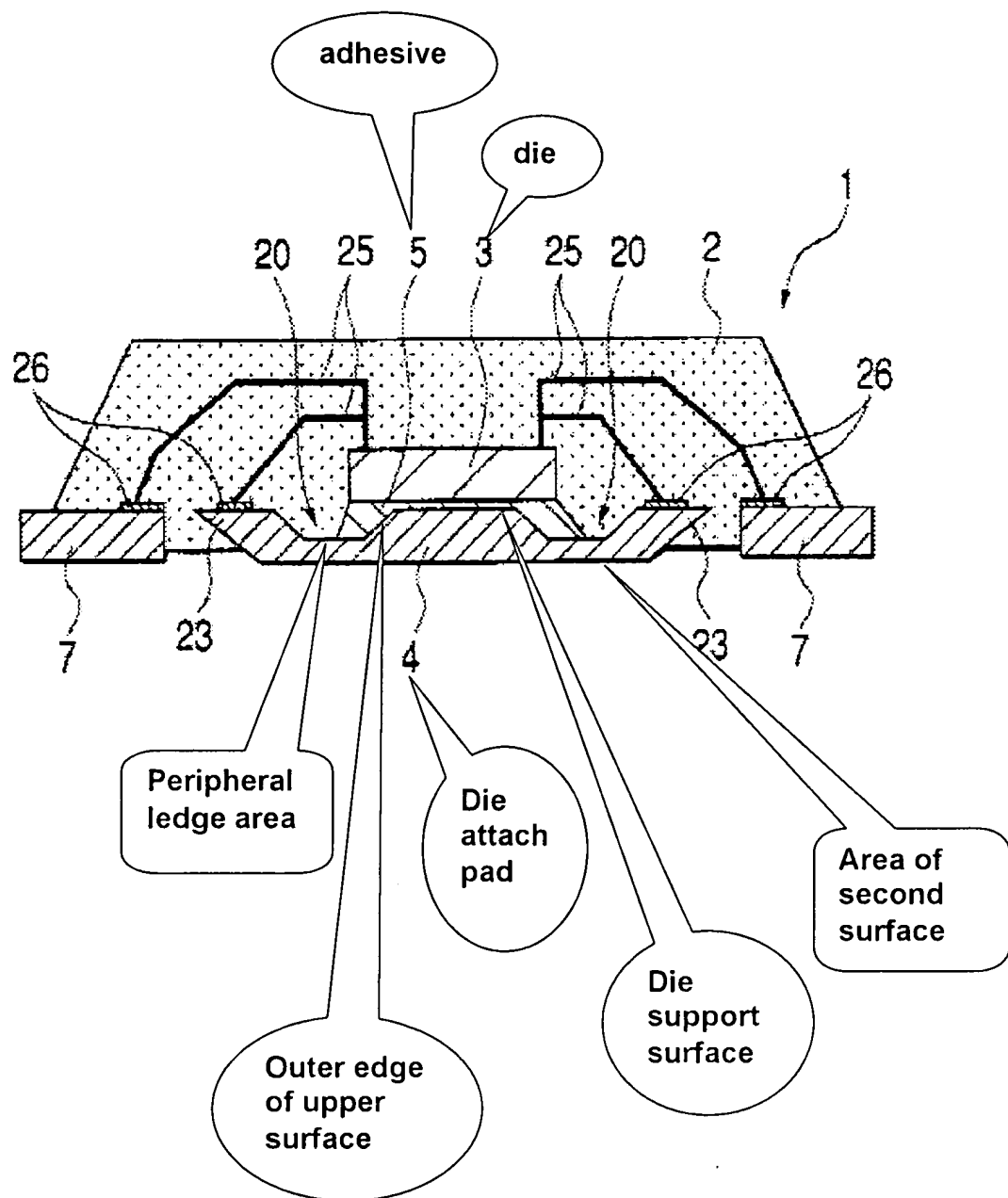
Regarding claims 1 and 8, Hasebe (Figs. 8 and 18) discloses a substrate panel for use in semiconductor packaging, the substrate panel comprising:

Art Unit: 2814

a lead frame panel 40 including a plurality of device areas 1 (Fig. 8, column 10, lines 65-67 and column 11, line 1), each device area 1 having a die attach pad 4 and a plurality of contacts 7, wherein each die attach pad 4 includes a die support surface and a peripheral ledge that is recessed relative to the die support surface (Fig. 18 labeled by the examiner below and column 11, lines 17-31); and

a plurality of semiconductor dice (see Fig. 8), each die 3 being attached to the die support surface of an associated die attach pad 4 using an adhesive 5 (Fig. 18 labeled by the examiner below), wherein a portion of each semiconductor die 3 extends beyond an outer edge of its associated die attach pad 4, and wherein the ledge is configured to retain an amount of the adhesive 5 (Fig. 18 labeled by the examiner below and column 12, lines 26-36).

**FIG. 18**



Regarding claim 2, Hasebe discloses that the peripheral ledges extend around the outer edges of the die attach pads 4 (Fig. 18 labeled by the examiner above).

Regarding claims 3 and 10, Hasebe discloses that each die attach pad 4 has a second surface opposite to the die attach surface, wherein the area of the die attach surface is less than the area of the second surface (Fig. 18 labeled by the examiner above and column 13, lines 12-14).

Regarding claims 4 and 11, Hasebe (Fig. 18) discloses that bottom surfaces of the contacts 7 are substantially co-planar with bottom surfaces of the die attach pads 4.

Regarding claims 5 and 12, Hasebe discloses further comprising an encapsulant 2 applied to the lead frame panel 40, wherein the second surfaces of the die attach pads 4 and the bottom surfaces of the contacts 7 are exposed on an outer surface of the encapsulant 2, and wherein the peripheral ledges retain amounts of the adhesive 5 so as to prevent the adhesive from being exposed on the outer surface of the encapsulant 2 (Fig. 18 labeled by the examiner above and column 7, lines 54-59).

Regarding claims 6 and 13, Hasebe discloses that at least some of the semiconductors dice 3 are down bonded to the respective ledges of their associated die attach pads 4 (Fig. 18 labeled by the examiner above and column 12, lines 12-25).

Regarding claim 7, Hasebe discloses that the lead frame panel 40 comprises a matrix of tie bars 9 arranged in perpendicular rows and columns that define a two dimensional array of the device areas such that adjacent device areas 1 are separated only by the tie bars (Fig. 21 and column 15, lines 35-47).

Regarding claim 9, Hasebe discloses that the peripheral ledge is located proximate to, and surrounding, an outer edge of the upper surface (Fig. 18 above).

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Theresa T. Doan whose telephone number is (571) 272-1704. The examiner can normally be reached on Monday to Friday from 7:00AM - 4:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, WAEL FAHMY can be reached on (571) 272-1705. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you

Application/Control Number: 10/789,258

Page 7

Art Unit: 2814

have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in black ink, appearing to read 'Theresa Doan'.

Theresa Doan  
Patent Examiner  
November 28, 2005.